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EXAMINER
CAO, DIEM K

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/082,591	ERLINGSSON, ULFAR
Office Action Summary	Examiner	Art Unit	
	DIEM K. CAO	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41,43-47,49,50,52-62,64-93,95-99,101,102 and 104-114* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41,43-47,49,50,52-62,64-93,95-99,101,102 and 104-114* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-41, 43-47, 49, 50, 52-62, 64-93, 95-99, 101, 102 and 104-114 are pending.

Applicant has amended claims 1, 49, 50, 52, 64, 101,102 and 104.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 2/17/2009 has been entered.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

4.   Claims 43 and 95 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed

invention.

Claim 43 recites "wherein the at least one dynamically alterable condition dependent rule

that specifies the desired behavior for the software component comprises a combination of static

rules and dynamic rules", which is not supported by the specification because the specification

seems to disclose the system has two type of rules: static rules and dynamic rules (page 6, lines

2-6), dynamic rules can be changed by a system administrator based on conditions (page 13, line

22 – page 14, line 6), and static rules can specify whether to consult the dynamic rules during the

valuation process of the intercepted request.

Claim 95 suffers the same problem as claim 43 above, and is rejected under the same

ground of rejection.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   **Claims 1-5, 8-9, 13-17, 19, 26-28, 30, 35-41, 43, 47, 49-50, 53, 54, 58-60, 64-69, 71, 78-**

80, 82, 87-91, 92-93, 95, 99, 101-102, 104-106 and 110-112 are rejected under 35

U.S.C. 103(e) as being unpatentable over Deianov et al. (U.S. 6,529,985 B1) in view of

Douglis et al (U.S. 6,587,877 B1).

As to claim 1, Deianov teaches intercepting a service request (intercepting the system

call; col. 3, lines 30-31 and col. 6, lines 28-38) made by a software component (processes 107;

col. 6, lines 46-48 and col. 8, lines 15-16), evaluating the service request based on at least one

rule (when a process makes a system call 115 that is to be intercepted, the interception module

111 executes; col. 8, lines 13-28), an original data in the service request (process identifier; col. 7, lines 9-23. Notes that "or" is used, so meeting the original data meets the limitation), and at least one of a present software system state (examiners the execution flag 131 ... executing; col. 8, lines 29-31. Again, because the limitation recites "at least one of a present system state and a past software system state", meeting a present system state is enough), dynamically selecting at least one desired behavior from among several behaviors for the software component based on the evaluation (execute the system call wrapper, or execute the system call 115 when the call was made by the wrapper; col. 8, lines 21-34), and dynamically controlling the software component such that the software component executes the selected desired behavior (execute system call wrapper or execute the actual system call; col. 8, lines 16-55).

Deianov does not teach dynamically alterable condition dependent rule, wherein the at least one dynamically alterable condition dependent rule is alterable while the requesting software component is running. However, Douglis teaches dynamically condition dependent rule, wherein the at least one dynamically alterable condition dependent rule is alterable while the requesting software component is running (In step 118C, the user decides to continue, essentially overriding the set conditions ... information service; col. 7, line 27 – col. 8, line 5col. 4, lines 1-15, col. 5, line 51 – col. 6, line 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Douglis to the system of Deianov because Douglis teaches a system/method that provide a reactive architecture that supports user-specified adaptation under various operating condition (col. 2, lines 24-30).

As to claim 2, Deianov teaches intercepting a service request comprises intercepting a software supported system call (system call; col. 3, lines 30-31 and col. 6, lines 28-38).

As to claim 3, Deianov teaches intercepting a software supported system call further comprises redirecting an entry in an interrupt vector table to alternative code (replace the pointer … executes instead; col. 6, lines 21-27).

As to claim 4, Deianov teaches intercepting a hardware supported system call (access of the system hardware; col. 1, lines 31-40).

As to claim 5, Deianov teaches intercepting a hardware supported system call further comprises redirecting an entry in an interrupt vector table to alternative code (system call wrapper; col. 1, line 67 – col. 2, line 2 and col. 6, lines 21-27).

As to claim 8, Deianov teaches intercepting a subroutine based service (a system call is a subroutine; col. 1, lines 31-40).

As to claim 9, Deianov teaches intercepting a subroutine based service further comprises redirecting the subroutine call instruction to alternative code (system call wrapper; col. 1, line 67 – col. 2, line 2 and col. 6, lines 21-27).

As to claim 13, Deianov teaches executing alternative code in response to intercepting the service request (When a process makes a system call … of the calling process; col. 8, lines 15-28).

As to claim 14, Deianov teaches executing alternative code in addition to calling the service request (When a process makes a system call … of the calling process; col. 8, lines 15-28 and the system call was made by the wrapper; col. 8, lines 44-55).

As to claim 15, Deianov teaches the alternative code performs an operation with a same purpose as that of the service request (inherent from the wrapper makes the system call; col. 8, lines 44-55).

As to claim 16, Deianov teaches the alternative code performs an operation with a different purpose from that of the service request (inherent from the wrapper may or may not make the system call; col. 8, lines 44-55).

As to claim 17, Deianov teaches preventing execution of the service request (col. 2, lines 8-15).

As to claim 19, Deianov teaches preventing code that executes in response to interception of the service request from accessing at least some data (col. 2, lines 8-15).

As to claim 26, see rejection of claim 13 above.

As to claim 27, see rejection of claim 14 above.

As to claim 28, see rejection of claim 17 above.

As to claim 30, see rejection of claim 19 above.

As to claim 35, Deianov teaches preventing code that executes in response to interception of the service request from accessing a system resource (col. 2, lines 3-13).

As to claim 36, Deianov teaches the system resource comprises a network (opening a network communication channel; col. 1, lines 36-39).

As to claim 37, Deianov teaches the system resource comprises a storage media (reading data from a file; col. 1, lines 36-39).

As to claim 38, Deianov teaches the system resource comprises a file system (file system; col. 2, lines 9-10).

As to claim 39, Deianov teaches the system resource comprises a specific file (reading data from a file; col. 1, lines 36-39).

As to claim 40, Deianov does not teach the system resource comprises configuration information. Deianov teaches system calls can access system hardware or software resources, file system (col. 1, lines 31-39 and col. 2, lines 9-19). It would have been obvious that the system resource also include configuration information.

As to claim 41, Deianov does not teach the configuration information comprises registry data. However, it is well known in the art that the configuration information includes registry data

As to claim 43, Deianov as modified teaches the at least one alterable condition dependent rule that specifies the desired behavior for the software component comprises dynamic rules (see Douglis: col. 5, line 63 – col. 6, line 16).

As to claim 47, Deianov teaches wherein the rules that specify the desired behavior for the software component are based on at least one of the following criteria: a user with which the software component is associated; identity of the software component; a time at which the software component is executing; history of the software component; a source of the software component; data which the software component attempts to access; functionality that software component attempts to execute; and computer network resources that the software component attempts to access (determining the calling process 107; col. 7, lines 7-23. It is noted that the reference needs only teach one of the above criteria).

As to claim 49, Deianov teaches an intercepting module (interception module),
intercepting a service request made by a software component (intercepting the system call; col. 3,
lines 30-31 and col. 6, lines 28-38 and processes 107; col. 6, lines 46-48 and col. 8, lines 15-16),
an altered states engine (interception module 111, initialization module 123; col. 7, lines 7-9), for
evaluating the service request based on at least one rule (selectively intercept system calls; col. 6,
lines 35-45), an original or modified data in the service request (process identifier; col. 7, lines 9-
23. Notes that "or" is used, so meeting one of the two meet the limitation), and at least one of a
present software system state (examiners the execution flag 131 … executing; col. 8, lines 29-31)
and a past software system state (the interception module … wrapper 125; col. 8, lines 16-19),
for dynamically selecting at least one desired behavior from among several behaviors for the
software component (execute the system call wrapper, or execute the system call 115 when the
call was made by the wrapper; col. 8, lines 21-34), alternative code for executing in response to
an intercepted service request made by the software component (system call wrapper; col. 5,
lines 52-53), for controlling the software component such that the software component executes
the selected desired behavior (col. 8, lines 16-28), the alternative code being coupled to the
altered states engine (col. 8, lines 56-58), wherein each software portion can be stored in the
memory and executed by the processor (col. 5, lines 50-62).

Deianov further teaches the interception module provides the functionality of the
intercepting module and the altered state engine (intercepting the system call; col. 3, lines 30-31
and interception module 111, initialization module 123; col. 7, lines 7-9). It would have been

obvious to one of ordinary skill in the art that the interception module can be implemented as the

intercepting module and the altered state engine for easier maintain.

Deianov does not teach dynamic alterable condition dependent rule, the altered states

engine being coupled to the interception module, at least one rules database, for storing at least

one dynamically alterable condition dependent rules, the rules database being coupled to the

altered states engine.

Deianov does not teach dynamically alterable condition dependent rule, wherein the at

least one dynamically alterable condition dependent rule is alterable while the requesting

software component is running, the altered states engine being coupled to the interception

module, at least one rules database, for storing at least one dynamically alterable condition

dependent rules, the rules database being coupled to the altered states engine.

However, Douglis teaches dynamically condition dependent rule, wherein the at least one

dynamically alterable condition dependent rule is alterable while the requesting software

component is running (In step 118C, the user decides to continue, essentially overriding the set

conditions … information service; col. 7, line 27 – col. 8, line 5col. 4, lines 1-15, col. 5, line 51 –

col. 6, line 20), the altered states engine being coupled to the interception module, at least one

rules database, for storing at least one dynamically alterable condition dependent rules, the rules

database being coupled to the altered states engine (databases of TEleWeb variables 26 and

conditional actions 28, and a communications manager 30; see Fig. 1 and associated text and col.

5, lines 51-55).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to apply the teaching of Douglis to the system of Deianov because Douglis teaches a

system/method that provide a reactive architecture that supports user-specified adaptation under

various operating condition (col. 2, lines 24-30).

As to computer system claim 50, it is the same as the method claim of claim 1 and is

rejected under the same ground of rejection.

As to claim 52, see rejection of claim 1 above. Deianov further teaches a computer

readable medium on which the program codes are stored (inherent from "an interception module

is loaded into the operating system"; col. 3, lines 34-36 and col. 5, line 63 – col. 6, line 4).

As to claim 53, see rejection of claim 13 above.

As to claim 54, see rejection of claim 19 above.

As to claims 58-60, see rejections of claims 26-28 above.

As to claim 64, see rejection of claim 1 above. Deianov further teach an altered state

engine (The initialization module; col. 7, lines 30-36).

As to claims 65-69, see rejections of claims 13-17 above.

As to claim 71, see rejection of claim 19 above.

As to claims 78-80, see rejections of claims 26-28 above.

As to claim 82, see rejection of claim 30 above.

As to claims 87-93, see rejections of claims 35-41 above.

As to claim 95, see rejection of claim 43 above.

As to claims 99, 101-102 and 104-106, see rejections of claims 47, 49, 50, 53-54 above.

As to claims 110-112, see rejections of claims 58-60 above.

7.   **Claims 44-46 and 96-98 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Deianov et al. (U.S. 6,529,985 B1) in view of Douglis et al (U.S. 6,587,877 B1) further in
view of Joshi et al. (US 2002/0091798 A1).**

As to claim 44, Deianov as modified by Douglis do not teach modifying the dynamic
rules in response to behavior of the software component. However, Joshi teaches modifying the
dynamic rules in response to behavior of the software component (page 6, paragraph [0103]). It
would have been obvious to one of ordinary skill in the art at the time the invention was made to
apply the teaching of Joshi to the system of Deianov because Joshi teaches an alternative method

that the dynamic rule can be altered based on different condition, i.e., in Joshi case, is the

behavior of the software component.

As to claim 45, Deianov does not teach wherein modifying the dynamic rules further

comprises responsive to an attempt by the software component to access specific data, creating a

rule that specifies that the software component cannot access other data. Joshi teaches responsive

to an attempt by the software component, consulting a rule that specifies whether the software

component can or cannot access other data (page 5, section 97).

As to claim 46, Deianov does not teach wherein modifying the dynamic rules further

comprises responsive to an attempt by the software component to access specific data, creating a

rule that specifies that the software component cannot perform certain functionality. Joshi

teaches responsive to an attempt by the software component, creating a rule that specifies

whether the software component cannot perform certain functions (page 5, section 0097).

As to claims 96-98, see rejections of claims 44-46 above.

8.   **Claims 6-7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Deianov et al. (U.S. 6,529,985 B1) in view of Douglis et al (U.S. 6,587,877 B1) further in

view of APA (Admitted Prior Art).

As to claim 6, Deianov does not teach intercepting a service request comprises intercepting a software library based subroutine call. APA teaches intercepting a service request comprises intercepting a software library based subroutine call (page 9, lines 13-15). It would have been obvious to one of ordinary skill in the art to combine the teaching of Deianov and APA because this would improve the system of Deianov by allowing intercepting different type of service requests, not only the system calls.

As to claim 7, Deianov does not teach intercepting a software library based subroutine call further comprises modifying at least one dynamically linked library. APA teaches intercepting a software library based subroutine call further comprises modifying at least one dynamically linked library (page 9, lines 13-15).

As to claim 10, Deianov does not teach intercepting a subroutine base service further comprises patching machine language entry code of the subroutine. APA teaches intercepting a subroutine base service further comprises patching machine language entry code of the subroutine (page 9, lines 15-16).

As to claim 11, Deianov does not teach intercepting a service request comprises intercepting a service dispatch mechanism based on dynamic name resolution. APA teaches intercepting a service request comprises intercepting a service dispatch mechanism based on dynamic name resolution (page 9, lines 17-18).

As to claim 12, Deianov does not teach intercepting a service dispatch mechanism based on dynamic name resolution further comprises modifying service lookup name space. APA teaches intercepting a service dispatch mechanism based on dynamic name resolution further comprises modifying service lookup name space (page 9, lines 17-18).

9.   **Claims 20-23, 31-32, 55, 72-75, 83-84 and 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deianov et al. (U.S. 6,529,985 B1) in view of Douglis et al (U.S. 6,587,877 B1) further in view of Chieu et al. (U.S. 6,587,888 B1).**

As to claim 20, Deianov does not teach allowing code that executes in response to interception of the service request to access alternative data, different from requested data. Chieu teaches allowing code that executes in response to interception of the service request to access alternative data, different from requested data (col. 5, lines 41-43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Deianov and Chieu because Chieu provides a method to implementing a dynamic software wrapper for discovery of non-exported functions and subsequent method interception.

As to claim 21, Deianov does not explicitly teach the alternative data comprises a copy of at least some data. Chieu teaches the alternate data comprises a copy of at least some data (col. 5, lines 41-43).

As to claim 22, Deianov teaches code that executes in response to the interception of the service request comprises at least alternative code (The interception module … of the calling process; col. 8, lines 16-28).

As to claim 23, Deianov teaches code that executes in response to the interception of the service request comprises at least the service request (col. 8, lines 15-28 and lines 44-46).

As to claims 31-32, see rejections of claims 20-21 above.

As to claim 55, see rejection of claim 20 above.

As to claims 72-75, see rejections of claims 20-23 above.

As to claims 83-84, see rejections of claims 31-32 above.

As to claim 107, see rejections of claim 55 above.

10.   **Claims 18, 29, 61, 70, 81 and 113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deianov et al. (U.S. 6,529,985 B1) in view of Douglis et al (U.S. 6,587,877 B1) and Chieu et al. (U.S. 6,587,888 B1) further in view of Smale (U.S. 5,764,985).**

As to claim 18, Deianov does note teach returning a value to the software component so as to simulate execution of the service request, without actually calling the service request. Smale teaches returning a value to the software component so as to simulate execution of the service request, without actually calling the service request (col. 5, lines 15-20). It would have been obvious to one of ordinary skill in the art to combine the teaching of Deianov and Smale because Smale provides a method to provide extended functionality to the lower level functions.

As to claim 29, see rejection of claim 18 above.

As to claim 61, see rejection of claim 29 above.

As to claim 70, see rejection of claim 18 above.

As to claim 81, see rejection of claim 29 above.

As to claim 113, see rejection of claim 61 above.

11.   **Claims 24-25, 56-57, 76-77 and 108-109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deianov et al. (U.S. 6,529,985 B1) in view of Douglis et al (U.S. 6,587,877 B1) further in view of Fin et al (U.S. 5,537,548).**

As to claim 24, Deianov does not teach passing alternative parameters to code that executes in response to interception of the service request. Fin teaches passing alternative parameters to code that executes in response to interception of the service request (col. 4, lines 56-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Deianov and Fin because Fin provides a method to modify the pass-in arguments to be processed by the new functions/codes.

As to claim 25, Fin teaches creating the alternative parameters by modifying original parameters passed to the service request (col. 4, lines 56-59).

As to claims 56-57, see rejections of claims 24-25 above.

As to claims 76-77, see rejections of claims 56-57 above.

As to claims 108-109, see rejections of claims 76-77 above.

12.   **Claims 33-34, 62, 85-86 and 114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deianov et al. (U.S. 6,529,985 B1) in view of Douglis et al (U.S. 6,587,877 B1) further in view of Smale (U.S. 5,764,985).**

As to claim 33, Deianov does not teach returning an alternative value to the software component. Smale teaches returning an alternative value to the software component (col. 5, lines 12-20).

As to claim 34, Smale teaches creating the alternative value by modifying a value returned by the service request (col. 5, lines 12-20).

As to claim 62, see rejection of claim 33 above.

As to claims 85-86, see rejections of claims 33-34 above.

As to claims 114, see rejection of claim 62.

Response to Arguments

13.   Applicant's arguments with respect to claims 1, 49, 50, 52, 64, 101,102 and 104 have been considered but are moot in view of the new ground(s) of rejection.

The rejection also has been clarified to show how Deianov teaches the evaluation step is based on three elements.

Conclusion

14.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEM K. CAO whose telephone number is (571)272-3760. The examiner can normally be reached on Monday - Friday, 7:30AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diem K Cao/
Primary Examiner